

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1, 2, 4-11, 29-38 and 55-58 are pending. Claims 1, 6, 29, 31, 35, 55 and 57 are independent and hereby amended. No new matter has been added. It is submitted that these claims, as originally presented, were in full compliance with the requirements of 35 U.S.C. §112. Changes to claims are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. SUPPORT FOR AMENDMENT IN SPECIFICATION

Support for this amendment is provided throughout the Specification as originally filed and specifically at paragraphs [0058], [0126], [0183], [0199] and Fig. 26 of Applicants' corresponding published application. By way of example and not limitation:

[0058] FIG. 26 is a diagram showing a table for the relation between the characteristic amounts used for estimating an audience state and **contents provision states**;

[0126] **The characteristic amounts used for estimating the state of the audience 60 may be selected and used according to the contents provision state.** When the movement of the audience 60 can be preferably obtained and sound including voice is difficult to obtain, the characteristic amounts showing a magnitude and periodicity of movement are mainly used to estimate an audience state. When the movement of the audience 60 is difficult to obtain and sound including voice can be preferably obtained, the characteristic amounts showing a volume and periodicity of sound

are mainly used to estimate an audience state. As shown in FIG. 26, in a concert, as indicated by .largecircle., the characteristic amounts 301, 305 and 304 respectively showing a magnitude of movement, periodicity of sound and a volume of sound are used. In a dark movie theater, the characteristic amounts 303, 305 and 304 respectively showing a power spectrum, periodicity of sound and a volume of sound are used. In a sports relay whose periodicity of sound is less than that of the concert, the characteristic amounts 301, 302 and 304 respectively showing a magnitude of movement, periodicity of movement and a volume of sound are used. The characteristic amounts used for estimating the audience state are selected according to a contents provision state to estimate the audience state more properly.

[0183] As described above, the logic operation of the estimated result of the characteristic amount 802 showing a ratio of low-frequency component of movement and the characteristic amount 804 showing a ratio of low-frequency component of sound is performed so that the operated result may be a final estimated result. **The characteristic amounts used for estimating the state of the audience 60 may be selected according to the contents provision condition.**

[0199] Thus, characteristic amounts are detected based on the frequency components of movement and sound so that the audience state can be estimated using the characteristic amounts. When the characteristic amounts are detected based on the frequency components of movement and sound, AND or OR of the estimated result of the characteristic amount based on the video signal and the estimated result of the characteristic amount based on the audio signal is calculated. When the estimated results are different, one estimated result can be obtained. As in FIG. 23, **the characteristic amounts used for estimating the state of the audience 60 may be selected according to the contents provision state.** An integrated value may be decided from plural characteristic amounts to compare the integrated value with a threshold value for estimating an audience state.

FIG. 26

| | CHARACTERISTIC AMOUNTS USED FOR ESTIMATION | | | | |
|---------------|--|---------------------------|---|---------------------------|---------------------------|
| | AT ESTIMATION OF BEATING TIME WITH THE HANDS AND CLAPPING, AND LAUGHING AND OTHER MOVEMENT | | AT ESTIMATION OF BEATING TIME WITH THE HANDS AND CLAPPING | | CHARACTERISTIC AMOUNT 304 |
| | CHARACTERISTIC AMOUNT 301 | CHARACTERISTIC AMOUNT 303 | CHARACTERISTIC AMOUNT 302 | CHARACTERISTIC AMOUNT 305 | |
| CONCERT | ○ | | | ○ | ○ |
| MOVIE THEATER | | ○ | | ○ | ○ |
| SPORTS RELAY | ○ | | ○ | | ○ |
| ⋮ | | | | | |

III. RESPONSE TO REJECTIONS UNDER 35 U.S.C. §103(a)

Claims 1, 2, 4, 5, 29-34 and 55-58 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 7,266,771 to Tow (hereinafter, merely “Tow”) in view of U.S. Patent No. 6,256,400 to Takata (hereinafter, merely “Takata”) in view of U.S. Patent No. 5,907,361 to Okada (hereinafter, merely “Okada”) and further in view of U.S. Patent Publication Application No. 2002/0073417 to Kondo et al. (hereinafter, merely “Kondo”).

Claims 6-8 and 35-36 were rejected under 35 U.S.C. §103(a) over Tow in view of Takata in view of Okada in view of U.S. Patent No. 7,373,209 to Tagawa (hereinafter, merely “Tagawa”) and further in view of Kondo.

Claims 9, 10 and 37 were rejected under 35 U.S.C. §103(a) over Tow in view of Takata in view of Okada in view of Tagawa in view of Kondo and further in view of U.S. Patent No. 5,550,928 to Lu (hereinafter, merely “Lu”).

Claims 11 and 38 were rejected under 35 U.S.C. §103(a) over Tow in view of Takata in view of Okada in view of Tagawa in view of Kondo and further in view of WO 91/03912 to Stevens (hereinafter, merely “Stevens”).

Claim 1 recites, *inter alia*:

...wherein **the movement amount is selected** to estimate an audience state **based on a contents provision state which indicates an environment condition of the audience...**

(Emphasis added)

Kondo relates to an audience response determination apparatus, a playback output control system, an audience response determination method and a playback output control method suitable for use in entertainment facilities where a large audience gathers for watching movies, concerts, plays, shows, sports events and various other events.

Applicants submit that neither Tow nor Takata nor Okada nor Kondo, taken alone or in combination, would disclose or render predictable the above-identified features of claim 1. Specifically, none of the references used as a basis for rejection discloses or renders predictable “wherein **the movement amount is selected** to estimate an audience state **based on a contents provision state which indicates an environment condition of the audience,**” as recited in claim 1.

Specifically, the Office Action (see pages 6-7) concedes that the combination of Tow and Takata and Okada does not teach the movement amount is selected to estimate an audience state based on a contents provision state, but asserts that Kondo teaches this feature, and refers to Kondo, paragraphs [0069], [0070], [0153], [0165], [0166], [0175], [0190], [0191], which are reproduced as follows:

[0069] During the playback of data about the movie content, the control unit 23 supplies information indicating the current playback content to the determination processing unit 12 as auxiliary information IP. The auxiliary information IP is used in the determination processing unit 12 for determining the audience response, as will be described later.

[0070] The specific content of the auxiliary information IP may vary. For example, it may be, for the purposes of indicating the current state of the movie,

indications about whether or not the movie is being shown, whether or not the movie proper (as distinguished from the commercials and trailers) is being shown, the type of the scene being shown, and whether or not music is being played.

[0153] The audience state determination unit 41 estimates the current state of the audience on the basis of the values of the above-mentioned respective determination signals (SSV, SSA, SSW and SSF) and by referring to the auxiliary information IP supplied from the server 9, which indicates the current playback content.

[0165] Furthermore, in step F107, the audience state determination unit 41 identifies the auxiliary information IP supplied from the server 9.

[0166] Thus identifying the values of the respective determination signals (SSV, SSA, SSW and SSF) and the auxiliary information IP, the audience state determination unit 41 then estimates the actual response of the audience based on these values. Examples of the estimation will be described later.

[0175] Those five types of audience response are estimated in step F108 on the basis of the values of the respective determination signals (SSV, SSA, SSW and SSF) and the auxiliary information IP, and by referring to a matrix shown in FIG. 18.

[0190] In this case, if the auxiliary information IP shows that music is being output, it can be estimated that the people in the audience are clapping their hands or singing along with the music, that is, their response is J2.

[0191] On the other hand, if it is confirmed that there is no music being output, it can be determined that the audience's movement is not in response to the music. Instead, it can be estimated that, if the movie is being played back, the people in the audience are exhibiting some form of action in response to the movie, such as rhythmically clapping their hands or uttering voices. And if such actions are taking place following the end of the playback, it can be estimated that the audience is demanding an encore or curtain call (by clapping their hands or saying "Encore!" in unison). Hence, their response is J3.

Kondo describes using auxiliary information to determine an audience response.

However, in the present invention, as shown in Fig. 26, the characteristic amounts used for estimating the state of the audience is selected and used according to the contents provision state, such as concert, movie theater, sport relay, and so on.

Thus, Kondo does not disclose or render predictable “wherein **the movement amount is selected** to estimate an audience state **based on a contents provision state which indicates an environment condition of the audience,**” as recited in claim 1.

Furthermore, this deficiency of Kondo is not cured by the supplemental teaching of Tow or Takata or Okada.

Therefore, Applicants submit that independent claim 1 is patentable and respectfully request reconsideration and withdrawal of the rejection.

For reasons similar to, or somewhat similar to, those described above with regard to independent claim 1, independent claims 6, 29, 31, 35, 55 and 57 are also patentable, and Applicants thus respectfully request reconsideration of the rejections thereto.

IV. DEPENDENT CLAIMS

The other claims in this application are each dependent from one of the independent claims discussed above and are therefore believed patentable for at least the same reasons. Applicants thereby respectfully request reconsideration and withdrawal of rejections thereto. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

Because Applicants maintain that all claims are allowable for at least the reasons presented hereinabove, in the interests of brevity, this response does not comment on each and every comment made by the Examiner in the Office Action. This should not be taken as acquiescence of the substance of those comments, and Applicants reserve the right to address such comments.


In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited reference, or references, it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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